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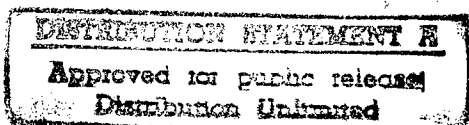
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RESOLUTIONS OF THE 9TH CONGRESS OF THE ALL-UNION
PHYSIOLOGICAL SOCIETY

IMENI ACADEMICIAN I. P. PAVLOV

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(Minsk , 10-18 June 1959)

The 9th Congress of the All-Union Physiological Society Imeni Academician I. P. Pavlov met in a period of extensive building of the Communist society, when science is acquiring increasingly greater significance in the life of the Soviet people.

The 21st Extraordinary Congress of the CPSU set before scientists the task of strengthening the association of science with practical applications, the wide and rapid introduction into the national economy of the achievements of science and technology.

The Congress paid attention to the fact that the theoretical requirement for raising medical science, and also agricultural sciences, is the development of biology, of which the physiological sciences are a part; it also paid attention to the necessity of the wide use in the biological sciences of the achievements of physics and chemistry for the development of biophysical investigations.

In connection with the new stage of the building of Communism, the role of public organizations, including scientific societies, is considerably growing in the development of science directed for the benefit of the Soviet people, the builder of Communism.

In evaluating the activity of the Central Council of the Society for the period of the report, in the light of these tasks, the Congress declared that:

1. The Central Council has conducted a considerable amount of work pertaining to the organizational strengthening of the Society, which is reflected in the fact that, for the period of the report, the number of members of the Society has grown from 2,700 to 3,500, included in 11 territ-

orial unions, consisting of 19 societies of the Union and Autonomous Republics and 46 municipal branches.

2. Most branches have significantly improved their work, a fact which is reflected in the more regular conducting of scientific sessions, in the discussion of a wider range of questions, and in the development of bonds with other scientific societies.

3. The Congress recognizes as useful the congresses and conferences which have been put into practice according to the plan of the Central Council, and which have been carried out in certain Republics and other unions, and approves the trial convening of symposiums and thematic meetings on the most important problems of physiology, biochemistry, and pharmacology.

4. In taking account of the printed production of members of the Society, of the results of the meetings and conferences held during the period of the report, and the reports presented at the present Congress, the Congress notes that the development of physiological science for the period of the report has been more diversified in our country than in past years. The number of works in the field of the physiology of respiration and circulation, the physiology of the kidneys, endocrinology, has increased; new fields of investigation, such as cosmic physiology, physiology utilizing microelectrode technology, have been mastered and are being developed. Investigations have been extended in the field of clinical physiology pertaining to the problem of the compensation of disturbed functions, the creation and study of new pharmacological agents, the structure of protein compounds, and many others.

In the period of the report, our sciences has made a substantial contribution to the development of Soviet medicine, and also of certain branches of the national economy.

At the same time, the Congress considers that in comparison with the vast tasks, set by the 21st Extraordinary Congress of the CPSU, and the continuously growing possibilities for the development of science in our country, the achievements of physiology, biochemistry, and pharmacology are insufficient.

1. The theoretical level of many investigations, being conducted in the institutes and at the academic departments, is insufficiently high. Along with brilliant works paving new paths in science, many stereotyped investigations are being conducted which do not present anything new in principle and are insufficiently profound, undertaken without the necessary critical mastery of the preceding experiments and without taking account of new data. One of the facts, which confirms this conclusion, is the large

number of articles (above 30 percent) declined by the editorial boards of the leading journals ("Zhurnal vysshey nervnoy deyatel'nosti" ("Journal of Higher Nervous Activity"), "Fiziologicheskii zhurnal SSSR" ("Physiological Journal USSR"), "Byulleten' eksperimental'noy biologii i meditsiny" ("Bulletin of Experimental Biology and Medicine"), "Farmakologiya i toksikologiya" ("Pharmacology and Toxicology"), "Voprosy meditsinskoy khimii" ("Problems of Medical Chemistry").

2. The insufficient organizational clarity in the planning of the development of physiology. In spite of a certain improvement in the planning and pooling of experiments, up to now there has been no clarity in the distribution of problems among the scientific institutions (of a physiological type) of various systems (Academy of Sciences USSR /AN SSSR/, Academy of Medical Sciences USSR /AMN SSSR/, Academy of Pedagogical Sciences RSFSR /APN RSFSR/, All-Union Academy of Agricultural Sciences imeni V. I. Lenin /VASKhNIL/, union academies, institutions of higher education /vuzy/, independent institutes, and scientific-practical institutions.

3. The unsatisfactory position as regards the introduction of new techniques into the practice of scientific-research work. In spite of the great expenditures both for the purchase of imported apparatus, and also for the creation of Soviet apparatus and preparations, and in spite of certain successes achieved in this /field/ in the last few years, up to now the construction and, in particular, the production, distribution, and supply of modern batch-produced apparatus lags behind the requirements of scientific institutions and limits the development of research.

4. The Congress notes that questions of the instruction of the physiological and pharmacological disciplines in the higher educational institutions and of the preparation of specialists in this field fall outside the field of vision of the Society and its Central Council. At the same time, the programs and conditions of instruction are lagging behind the growth of science and the rising demands for graduating specialists from the higher educational institutions.

The Congress considers that, in the next few years, scientific workers in the field of the physiological sciences are going to have to solve a number of important problems of great theoretical and practical national-economic significance. Problems of the harmonic combination of mental and physical labor, rational nutrition, the prophylaxis of the most important diseases of man, the working out of scientific indications for the creation of optimal conditions of growth of children and adolescents and the preservation of work capacity in the elderly, are newly arising at the present time. These questions can not be resolved without pro-

foundly working out the theory of medical science, utilizing the advanced Soviet physiology, and developing the materialist traditions of I. M. Sechenov, I. P. Pavlov and N. Ye. Vvedenskiy. Investigations in physiology, biochemistry, pharmacology and biophysics should consequently be profound, should resolve fundamental theoretical questions on the basis of the experimental application of new technology, should reveal the most important patterns of the organism of man and animals and should be directed at practical tasks of great significance.

The Congress considers that physiology must be comprehensively developed in the next few years. It must be directed at the solution of the most important theoretical investigations, closely linked with the solution of the problems of national economic and cultural significance in the field of medicine, agriculture, philosophic questions, etc.

The Congress notes the following most important directions of the fields of science represented at the Congress:

a) The physiology and pathological physiology of the higher nervous activity of man and animals. In this field the Congress considers it necessary to pay particular attention to the working out of questions of the physiology of the higher nervous activity, in particular, the interactions of the signal systems of the healthy and sick human as a natural-scientific basis of the materialistic theory of cognition, psychology, pedagogics, and certain medical disciplines. Investigations in this field must also include the profound study of the work and interaction of all divisions of the central nervous system, including its peripheral parts.

For this purpose, the creative working out of new approaches and methods of investigation, adequate to the complexity of the processes being studied, is necessary.

b) The problem of the regulation of the activity of organs and systems, necessarily taking account of neural and humoral (including endocrine) factors.

c) The patterns of the course of physiological processes. Noting that investigations are primarily directed at the study of the regulation of processes and noting their insufficient orientation toward the investigation of the processes themselves, the Congress considers it necessary to intensify the works in this direction, in particular, pertaining to questions of coronary and cerebral circulation, respiration, nutrition, absorption, excretion, hormonal regulation of functions, etc.

d) Normal and pathological patterns of the activity of the analyzers. Special attention is being paid to the development of investigations in physiological optics and acoustics; these investigations, in connection with the de-

velopment of new branches of industry and new sections of physiology (cosmic medicine), should ensure the solution of a number of practical problems at a high theoretical level.

e) The physiology and biochemistry of the cell: The study of the mechanisms of regulation of cellular functions, processes of reproduction of cells and cellular structures; the further working out of the problems of permeability and stimulability.

f) Biologically active substances. The investigation of biologically active substances, the study of their structure and function, the mechanism of their formation and conversions.

g) Problems of pharmacology and toxicology. It is necessary to broaden the work pertaining to the search for new therapeutic substances and to the study of the mechanisms of their action, to develop investigations pertaining to the pharmacology of pathological processes.

The Congress notes the insufficient development of works pertaining to the chemotherapy of infectious and, particularly, invasive diseases.

The work in general pharmacology should be broadened. The rapid growth of chemical industry dictates the necessity of a considerable development of toxicological investigations.

h) The influence of external medium factors on physiological functions. Necessary in this field is the conduct of broad physiological, biochemical, and pharmacological investigations, directed at the study of the reactions, arising in response to the action of various forms of radiant energy, in particular, penetrating radiation, and also of mechanical and electromagnetic oscillations, accelerations, etc. These investigations should also pursue the goal of searching for methods of therapy of the diseases arising under these conditions.

i) Cosmic and aviation physiology.

The Congress considers that all these directions should be developed in many mutually supplementary aspects: the evolutionary, the comparative physiological, at the cellular level, in acute and chronic experiments on animals, and in investigations on man. Taking into account the practical significance of human physiology, the Congress considers it necessary to intensify the works in this field, paying particular attention to making these investigations more profound and to raising their quality, without which they can not be sufficiently useful for practice. This applies to such divisions of human physiology as clinical physiology, aviation and cosmic physiology, the physiology of labor and sport and others, which have been considerably strengthened in the last few years. The further development of investigations in age physiology, biochemistry and pharma-

cology, having in view their great significance for the practice of child public health, is also necessary.

The Congress resolves:

1. To acknowledge the work of the Central Council for the period of the report from the 8th to the 9th Congresses of the Society as satisfactory.

2. To make it incumbent upon the new composition of the Central Council of the Society:

a) To establish from the very beginning of the work a clear distribution of duties among the members of the Central Council, providing a constant systematic work for each of them, independently of the place of his constant work.

b) With the object of organizing a systematic bond with the branches of the Society, to entrust certain members of the Central Council with duties pertaining to the coordination of the activity of several local branches of the Society.

c) To call sessions of the plenum of the Central Council at least once a year.

d) To consider it expedient, along with the calling of Congresses and conferences, including regional meetings, to conduct symposia on the most important and rapidly developing scientific problems, and also more limited meetings on individual problems and scientific-organizational questions. It is recommended that the Central council take account both of the positive experience, and also of the failures of organization of the symposia, which were held at the 9th Congress of physiologists, biochemists, and pharmacologists.

e) To intensify the links with other scientific societies, particularly through conducting joint scientific meetings and conferences.

f) For the Central Council at least one a year to assemble plenary meetings with reports of members of the scientific councils heard on problems concerning the state of certain fields of physiology, biochemistry, pharmacology, biophysics in the USSR and abroad. To organize cycles of lectures of leading specialists on these questions for a wide scientific public.

g) To pay particular attention to the improvement of the quality of physiological investigations in the peripheral institutions of higher education and scientific-research institutions.

h) To take measures for the improvement of the quality of the work of those branches of the Society, the work of which has weakened recently.

i) To organize systematically and conduct discussions of educational plans, educational programs, textbooks,

handbooks, and teaching aids in physiology, biochemistry, and pharmacology for higher and other educational institutions. To place the question before the ministries (of Public Health, Higher Education, etc.) of increasing the number of lecture hours in physiology and pharmacology and of the introduction into the staff of departments of physiology and pharmacology of lecture assistants.

3. The Congress considers it necessary to charge the Central Council of the Society as follows:

a) Noting the existing parallelism in the planning of investigations pertaining to problems of physiology, biochemistry, biophysics, and pharmacology in the institutions of the Academy of Sciences USSR, the Academy of Medical Sciences USSR, the Academy of Pedagogical Sciences RSFSR, and the ministries, to place before the enumerated scientific organizations the question of the creation of united coordinating centers on the individual special problems.

b) To take active part in the work pertaining to the profiling of scientific-research institutes, which is being conducted by the Academy of Sciences USSR and other higher scientific organs of the country, with the object of the clear division of their functions, providing better organizational forms of bond of theory with practice and a more harmonious development of all the fundamental fields of physiology, biochemistry, and pharmacology.

c) To devote the attention of the Central Council to the acute deficit of young cadres of high qualification (professors, doctors of science) in physiology and pharmacology. To take the necessary measures for the very speedy removal of this situation, which threatens the fruitful development of science.

d) To bring to the notice of the Divisions of the Biological Sciences and of the Presidiums of the Academy of Sciences USSR, the Academy of Medical Sciences USSR, the All-Union Academy of Agricultural Sciences imeni V. I. Lenin and the Ministry of Higher Education USSR, the unsatisfactory state of the production of scientific-research apparatus, particularly of electrophysiological and biophysical apparatus -- as well as of reagents and chemicals -- which is a serious hindrance to the development of physiological sciences.

e) To address to the Ministry of Higher Education USSR, the Ministry of Health and the Ministry of Agriculture USSR, a letter justifying the necessity of taking urgent measures for intensifying the staff composition, increasing the appropriations for scientific work and the radical improvement of the equipment of departments of physiology, biochemistry and pharmacology of the universities, medical,

agricultural, and pedagogic institutes. At the same time, special attention should be paid to the organization of institutes created in the Eastern USSR.

f) With the object of methodical aid in the mastery of new methods of investigation and the new complex apparatus, to organize a methodological consultative bureau, and also to convoke periodically in the corresponding chief institutes, seminars on new experimental methods for members of the peripheral branches of the Society, providing advance information to the branches concerning such measures.

g) To request Medgiz /State Publishing House of Medical Literature/ and the Presidium of the Academy of Medical Sciences USSR to issue, beginning in 1960, jointly with the All-Union Physiological Society a series of monographs pertaining to physiology and a series of manuals on methods of physiological investigation.

h) To request the Presidium of the Academy of Sciences USSR to issue collections of the works of Academician L. A. Orbeli and Academician K. M. Bykov.

i) To charge the Central Council of the Society with submitting a petition concerning increasing the number of sheets of the "Fiziologicheskiy zhurnal SSSR," and also the journals "Vysshaya nervnaya deyatel'nost'," "Farmakologiya i toksikologiya," "Tsitologiya" (Cytologia), which at the present time are not capable of providing the prompt publication of scientific works.

It is also necessary to submit a petition concerning the organization of two new journals: "Fiziologiya nervnoy sistemy im. N. Ye. Vvedenskogo" (Physiology of the Nervous System imeni N. Ye. Vvedenskiy) and "Fiziologiya sel'skokhozyaistvennykh zhivotnykh" (Physiology of Agricultural Animals).

j) To submit the question of the transfer of the sheets, allotted for the publication of the Transactions of the Society (16 printed sheets per year) to the "Fiziologicheskiy zhurnal SSSR" for the systematic printing of author's abstracts of reports at the meetings of branches of the Society.

To request the editors to place on the pages of the journals more review articles on various branches of physiology.

To make it incumbent upon the branches of the Society to send systematically to the "Fiziologicheskiy zhurnal SSSR" a complete bibliography of all works on physiology, issued in the collections and transactions, for its periodic printing on the pages of the journal.

For the Central Council of the Society to hear periodically the reports of the editors of the journals at its

meetings.

4. The Congress considers it necessary in the further activity of the Society:

a) To consider the most important tasks of the Society to be the intensification of ideological work; the struggle against reactionary, bourgeois "theories" and views in physiology; to work out jointly with philosophers the most important philosophical questions of science as a natural scientific basis for dialectic materialism.

b) To intensify the work of the members of the Society in scientific-atheistic propaganda, pertaining to the spread of the bases of materialistic Pavlovian physiology and the achievements of modern science in the field of physiology, biochemistry, and pharmacology. With these objects, to establish a closer association with the All-Union Society for the Dissemination of Political and Scientific Knowledge and its branches in the localities.

c) To enlist young scientists in the work of the Society and to conduct work for increasing the membership of the Society.

The Congress summons all members of the Society to creative scientific work and to active participation in the resolution of organizational questions. The Congress expresses confidence that the numerous groups of Soviet physiologists, biochemists, and pharmacologists will apply all their force and knowledge to the fulfilling of the national tasks, which stand before the Society in connection with the new historic period of the building of Communism in our country.

Submitted 19 November 1959

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